IN THE CLAIMS:

Please amend the claims as follows. No new matter has been added by way of these amendments.

1. (Original) A method of identifying the presence of hydrogen sulfide in fluid produced from a reservoir, comprising:

providing a tool comprising at least one sample of material that is optically reactive to the presence of hydrogen sulfide; and

exposing the at least one sample of material to a sample of reservoir fluid upon the fluid production from the reservoir.

2. (Original) The method of claim 1, further comprising:

inspecting the optical change on the surface of the at least one sample of material to determine if hydrogen sulfide is present in the reservoir fluid.

3. (Original) The method of claim 1, further comprising:

inspecting the optical change on the surface of the at least one sample of material to estimate the quantity of hydrogen sulfide contained in the reservoir fluid.

4. (Original) The method of claim 1, further comprising:

lowering the tool into a wellbore; and

retrieving the tool from the wellbore.

5. (Original) The method of claim 1, further comprising:

taking temperature readings of the reservoir fluid.

6. (Original) The method of claim 1, further comprising:

taking temperature readings of the reservoir fluid;

inspecting the at least one sample of material for exposure to hydrogen sulfide contained in the reservoir fluid; and

estimating the hydrogen sulfide content of the reservoir fluid based upon the inspection of the optical change on the surface of the at least one sample of material and the temperature readings of the reservoir fluid.

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7. (Currently Amended) The method of claim 1, wherein the at least one sample of material is selected from a group comprising chromium, nickel and steel alloys~~Monel alloy 400, 70-30 cupronickel, 90-10 cupronickel, 5Cr steel, 9Cr steel, 12Cr steel, 316 stainless steel, nickel alloy 200, incoloy 600, and alloy B~~.

8. (Original) The method of claim 1, further comprising:

detecting an optical change on the surface of at least one sample of material with a sensor.

9. (Original) The method of claim 8, further comprising:

transmitting a signal indicating an optical change on the surface of at least one sample of material as a result of detecting hydrogen sulfide.

10. (Original) A method for identifying the presence of hydrogen sulfide in a subsurface formation penetrated by a wellbore, comprising:

lowering a downhole tool into the wellbore, the tool comprising a housing, at least one sample of material with a surface that is optically reactive to the presence of

hydrogen sulfide, and at least one passage for conducting formation fluid to the sample of material;

delivering formation fluid to the sample of material via the passage;

retrieving the downhole tool from the wellbore; and

inspecting the sample of material to determine if the wellbore fluid contained hydrogen sulfide.

11. (Currently Amended) The method of claim 10, wherein the at least one sample of material is selected from a group comprising chromium, nickel and steel alloys~~Monel alloy 400, 70-30 cupronickel, 90-10 cupronickel, 5Cr steel, 9Cr steel, 12Cr steel, 316 stainless steel, nickel alloy 200, incoloy 600, and alloy B~~.

12. (Original) The method of claim 10, wherein the tool comprises a plurality of optically reactive coupons, the coupons capable of different optical changes in response to varying hydrogen sulfide concentrations.

13. (Original) The method of claim 10, further comprising:

taking temperature readings of the formation fluid;

inspecting the optical change of the at least one sample of material to determine if hydrogen sulfide is present in the formation fluid; and

estimating the hydrogen sulfide content of the in situ formation fluids utilizing the optical change on the surface of the at least one sample of material and the temperature readings of the formation fluid.

14. (Original) The method of claim 10, further comprising:

transporting formation fluid through the downhole tool; and

collecting formation fluid samples within the downhole tool.

15. (Original) A method for identifying the presence of hydrogen sulfide in a subsurface formations penetrated by a wellbore, comprising the steps of:

lowering a downhole tool into the wellbore, the tool including a housing having at least one sample of material that is reactive to the presence of hydrogen sulfide and a passage for conducting formation fluid to the sample of material;

delivering formation fluid to the sample of material via the passages;

retrieving the downhole tool from the wellbore; and

inspecting the sample of material to determine if the wellbore fluid contained hydrogen sulfide.

16. (Original) The method of claim 15, wherein the sample of material is a metal.

17. (Currently Amended) The method of claim 16, wherein the metal is selected from a group comprising copper and nickel alloys ~~monelalloy 400, 70-30 cupronickel, and 90-10 cupronickel~~.

18. (Original) The method of claim 15 wherein the sample of material reacts to hydrogen sulfide by changing color.

19. (Original) A method of reservoir analysis, comprising:

providing a downhole tool comprising at least one sample of material that is optically reactive to the presence of hydrogen sulfide;

lowering the downhole tool into a wellbore that penetrates a reservoir;

flowing formation fluid through the downhole tool;

exposing the at least one sample of material to formation fluid upon the formation fluid entry into the wellbore;

taking temperature readings of the formation fluid;

collecting formation fluid samples within the downhole tool;

retrieving the downhole tool from the wellbore;

inspecting the optical change of the at least one sample of material for exposure to hydrogen sulfide contained in the formation fluid; and

estimating the hydrogen sulfide content of the formation fluid within the reservoir utilizing the inspection of the optical change of the at least one sample of material and the temperature readings of the formation fluid.

20. (Original) An apparatus, comprising:

a housing; and

at least one sample of material that is optically reactive to the presence of hydrogen sulfide positioned in the housing;

wherein the at least one sample of material is adapted to be exposed to reservoir fluid upon the reservoir fluid entry into the apparatus.

21. (Original) The apparatus of claim 20, wherein the sample of material is a metal.

22. (Currently Amended) The apparatus of claim 21, wherein the metal is selected from a group comprising comprising chromium, nickel and steel alloys~~Monel alloy 400, 70-30 cupronickel, 90-10 cupronickel, 5Cr steel, 9Cr steel, 12Cr steel, 316 stainless steel, nickel alloy 200, incoloy 600, and alloy B~~.

23. (Original) The apparatus of claim 20, wherein the sample of material reacts to hydrogen sulfide by changing color.

24. (Original) The apparatus of claim 20, further comprising a temperature sensor.

25. (Original) The apparatus of claim 20, further comprising a pressure sensor.

26. (Original) The apparatus of claim 20, wherein the at least one sample of material comprise removable coupons.

27. (Original) The apparatus of claim 20, wherein the at least one sample of material comprises removable coupons having different reactive responses to hydrogen sulfide.

28. (Original) The apparatus of claim 20, wherein the housing further comprises a coupon holder that is resistant to hydrogen sulfide capable of retaining the at least one sample of material.

29. (Original) The apparatus of claim 20, wherein the apparatus comprises at least three hydrogen sulfide detection coupons.

30. (Original) The apparatus of claim 20, wherein the apparatus further comprises a sensor capable of detecting a change in the at least one sample of material as a result of detecting hydrogen sulfide.

31. (Original) The apparatus of claim 30, wherein the sensor is capable of transmitting a signal indicating a change in the at least one sample of material as a result of detecting hydrogen sulfide.

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32. (Currently Amended) A downhole tool, comprising:

a plurality of coupons that are optically reactive to the presence of hydrogen sulfide;

a housing capable of retaining the coupons and having a passage for communicating formation fluids between a wellbore and the coupons;

a temperature sensor;

a ~~hydraulic mechanism~~ probe capable of flowing formation fluids ~~through the passage and through~~ into the downhole tool;

wherein when the formation fluids are pumped through the downhole tool the coupons are exposed to the formation fluid upon the formation fluid entry into the downhole tool; and

wherein the surface of the plurality of coupons are capable of changing color upon contact with hydrogen sulfide and can be interpreted to determine the hydrogen sulfide content in the formation fluids.

33. (Original) The downhole tool of claim 32, wherein the downhole tool further comprises a sensor capable of detecting a change in the at least one sample of material as a result of detecting hydrogen sulfide.

34. (Original) The downhole tool of claim 33, wherein the sensor is capable of transmitting a signal indicating a change in the at least one sample of material as a result of detecting hydrogen sulfide.

35. (Currently Amended) An apparatus for identifying the presence of hydrogen sulfide in a wellbore penetrating a subsurface formation, comprising:

a downhole tool including a housing having at least one sample of material that is reactive to the presence of hydrogen sulfide<u>, the housing having</u> ~~and~~ a passage for conducting formation fluid to the sample of material when the downhole tool is lowered into the wellbore~~; and~~

~~a hydraulic assembly for delivering formation fluid to the sample of material via the passage~~.

36. (Original) The apparatus of claim 35, wherein the sample of material is a metal.

37. (Currently Amended) The apparatus of claim 36, wherein the metal is selected from a group comprising copper and nickel alloys ~~monelalloy 400, 70-30 cupronickel, and 90-10 cupronickel~~.

38. (Original) The apparatus of claim 35 wherein the sample of material reacts to hydrogen sulfide by changing color.